61. (Amended) An LHRH antagonist comprising a peptide compound, wherein a residue of the peptide compound corresponding to the amino acid at position 6 of natural mammalian LHRH [comprises a small polar moiety, said small polar moiety having a log P between -1 and +2] is selected from the group consisting of D-asparagine, D-threonine and D-glutamine, wherein the peptide compound has LHRH antagonist activity, inhibits ovulation in at least 50% of treated rats in a standard rat antiovulatory assay at a dose of 5 μg/rat, and has an ED_{50} for histamine release of at least 3 μg/ml, or a pharmaceutically acceptable salt thereof.

71. (Amended) A peptide compound comprising a structure:

A-B-C-D-E-F-G-H-I-J

wherein

A is pyro-Glu, Ac-D-Nal , Ac-D-Qal, Ac-Sar, or Ac-D-Pal;

B is His or 4-Cl-D-Phe;

C is Trp, D-Pal, D-Nal, L-Nal-D-Pal(N-O), or D-Trp;

D is Ser;

E is N-Me-Ala, Tyr, N-Me-Tyr, Ser, Lys(iPr), 4-Cl-Phe, His, Asn, Met, Ala, Arg or Ile;

F is selected from the group consisting of D-Asn, D-Gln and D-Thr

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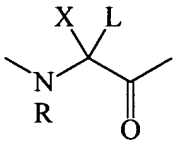

wherein

R and X are, independently, H or alkyl; and

L comprises a small polar moiety, said small polar moiety having a log P between -1 and +2];

G is Leu or Trp;

H is Lys(iPr), Gln, Met, or Arg;

I is Pro; and

J is Gly-NH_2 or D-Ala-NH_2;

or a pharmaceutically acceptable salt thereof.